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THE Chemist

MARCH, 1946 VOLUME XXIII, No. 3

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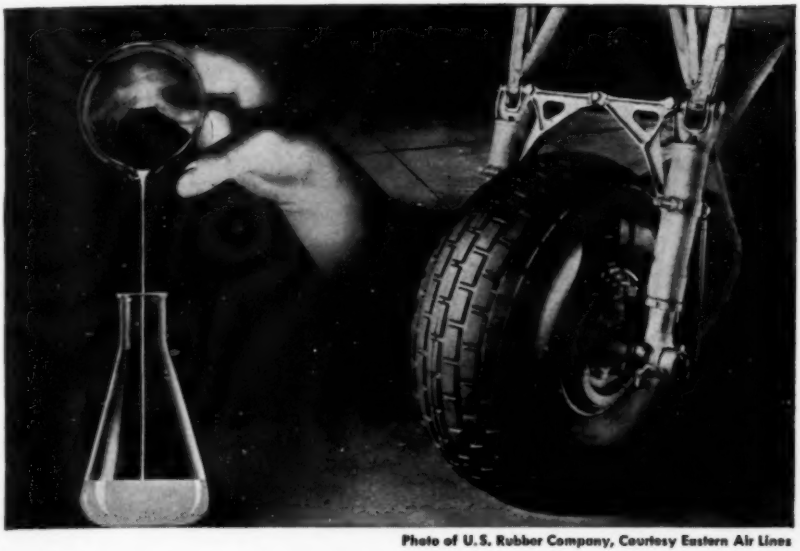

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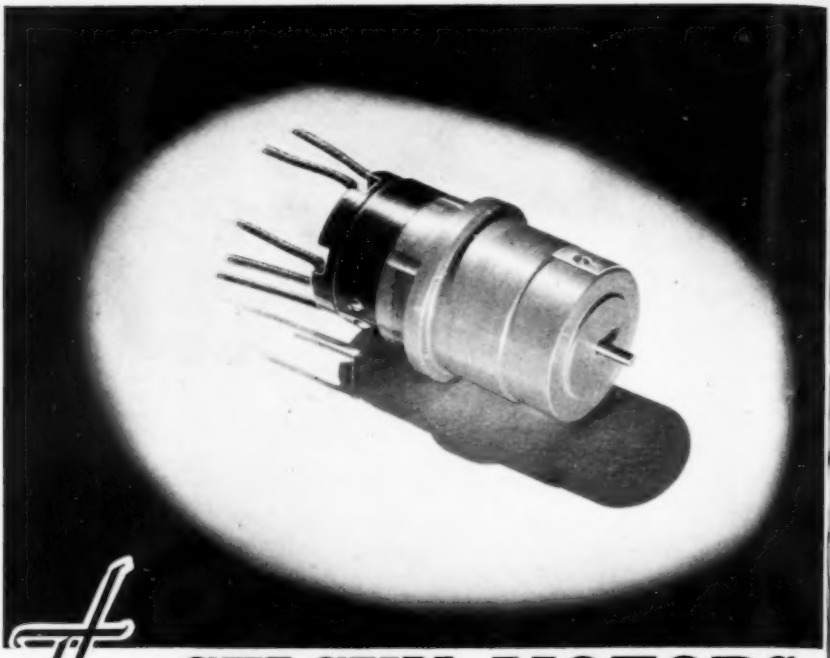

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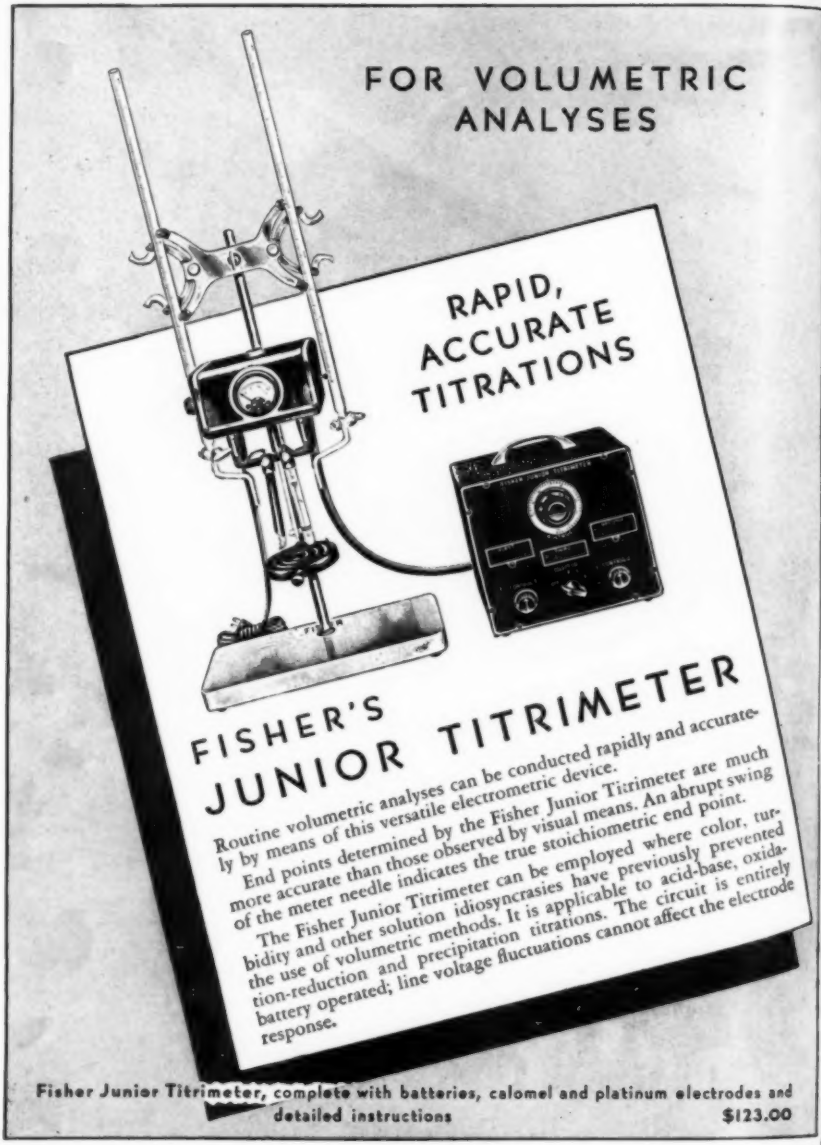
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The President's Views on Pending Science Legislation

CORRESPONDENCE between the Chicago Chapter of THE AMERICAN INSTITUTE OF CHEMISTS and the Assistant to the Deputy Director of the Office of War Mobilization and Reconversion, Washington, D. C., expresses the position of the Administration in relation to pending legislation for a National Science Foundation.

The Chicago Chapter wrote to the President approving the principles contained in the original Magnuson Bill S.1285. The reply from the Assistant to the Deputy Director refers to the Committee Print, S.1297 dated October 8, 1945, wherein an attempt was made to reconcile the Magnuson Bill, S.1285, and the Kilgore Bill, S.1297.

On December 21, 1945, Bill S.1720, evolved from the October hearings sponsored by Senators Magnuson, Kilgore, and Fulbright, was introduced by Senator Kilgore (West Virginia) for himself, Senator Johnson (Colorado), Senator Pepper (Florida), Senator Fulbright (Arkansas) and Senator Saltonstall (Massachusetts). The sponsoring Senators stated that it is an attempt to reconcile the differing points of view brought out in the hearings on both the original Kilgore Bill and the Magnuson Bill. Bill S.1720 has been widely reprinted, one convenient source being *Science,* Jan. 11, 1946.

However, according to the *Congressional Daily,* Jan. 24, 1946, the Senate Military Affairs Committee met January 23rd with Dr. Vannevar Bush, at a closed meeting, to rewrite S.1720. It is said that agreement was reached on all but technical provisions.

Copies of the correspondence referred to above follow:

December 11, 1945

To President Harry S. Truman:

There are two bills pending in the Senate to create a federally financed Research or Science Foundation. They are the Magnuson bill, S.1285, and the Kilgore bill, S.1297.

The Chicago Chapter of The American Institute of Chemists met November 30th to discuss fully the subject matter of the two Senate bills.

We are convinced that the United States must promote scientific research and, particularly, basic research. We are also convinced that the board of directors entrusted with

the promotion of basic research should be scientists of highest integrity and quality. They should be completely free of politics, either partisan or otherwise. We further believe that the primary purpose of the work should be to add to our fundamental knowledge rather than to patents. It will be remembered that elemental principles are not patentable. Where patentable material is found, the board should be left free to negotiate an equitable settlement of the rights between the Government, the inventor, and the institution wherein the work was conducted, taking into consideration all factors of each case in question.

After an evening of discussion on these bills, the following resolution was formally passed at this meeting: "The members of the Chicago Chapter of The American Institute of Chemists are in favor of: 1. A National Research Foundation whereby Scientific Research would be sponsored by the Federal Government. 2. The principles contained in the Magnuson bill (S.1285)."

We sincerely hope that you will give careful consideration to our views. If we, as scientists, can be of help to you in connection with legislation relating to scientific matters, please call on us.

Respectfully yours,
Charles L. Thomas, Secretary-Treasurer, Chicago Chapter, A.I.C.

December 26, 1945

To Mr. Charles L. Thomas:

The President has asked me to reply to your letter expressing your views with respect to the pending legislation for the establishment of a National Research Foundation.

The President, on a number of occasions, has made clear his position with respect to this matter. The statement appearing in a letter written by the Director of War Mobilization and Reconversion to Senators Kilgore and Magnuson gives a rounded summary of the Administration's judgment. For your information, a copy of that letter is enclosed.

Your courtesy in giving us a statement of your opinions is appreciated, and you may be certain that they will be given the most careful consideration.

Sincerely yours,
James Newman, Assistant to the Deputy Director, Office of War Mobilization and Reconversion.

To Honorable Harley M. Kilgore:
Honorable Warren G. Magnuson:

A short time ago I received a request from you for my views with regard to legislation now pending for the establishment of a Federal Research Agency. I have given considerable thought to this important matter and have talked about it at some length with the President.

The President has authorized me

to convey to you his views on the subject and in what follows, therefore, I am giving you a summary of his own judgments:

The President expressed his gratification at the careful and deliberative hearings which your Committee has been holding. He feels that you are thereby rendering a distinct service to the future of scientific research, to the Congress and to the people, in setting forth the considerations and problems which must be met if we are to formulate a constructive Federal research policy.

The President believes that there may have been ambiguity as to the recommendations of the Administration on the form which Federal research legislation should take. To clarify possible misunderstanding, he has asked me to state that he considers the following factors as essential to the establishment of a sound Federal Research Agency:

1. The agency should be under the direction of a single Administrator who shall be a full-time Federal official. The Administrator should have the services of an advisory board composed of the best qualified scientists in the country. Both the Administrator and the board should be appointed by the President.

The President feels strongly, as do I, that an organization so designed would conform to sound administrative practice and experience and would best achieve the objectives common to both of the legislative proposals now before you.

The President believes that it would be unwise to leave the administration of the agency to a commission composed of part-time members with a variety of outside interests.

2. It is the President's opinion that one of the major functions of a Federal Research Agency must be to coordinate Federal research activities so as to achieve a balanced and effective program. This would not interfere with the separate research programs of the several Federal agencies, but would be intended to assure their effective synchronization.

3. Without recommending the specific patent proposals which the Congress may wish to adopt in establishing a Federal Research Agency, the President is of the opinion that we must achieve uniformity in patent procedures among all Federal agencies, that the fruits of research financed by Federal funds must become the property of the United States and should be made fully, freely and publicly available to all and, finally, that since neither of these objectives envisages changes in existing patent laws, but merely reflect existing sentiments, it is appropriate to incorporate the objectives in such science legislation as the Congress may see fit to adopt.

I have examined Committee Print, S.1297, dated October 8, 1945. I am informed that this print represents

a work-sheet incorporating what in the judgment of both of you represents the best features of S.1285 and S.1297. It appears to me that this print embodies the principles to which the President recommends adherence. For that reason, I wish to give my support to legislation enacted in accord with the provisions of the Committee Print. My own views coincide further with those expressed in a letter sent by Mr. Harold Smith, Director, Bureau of the Budget, to several of the Executive Departments in response to their inquiries as to the position of the Administration relative to the measures on which you are now holding hearings.

I wish to thank both of you again for your invitation to testify and to express the hope that you will find this letter a satisfactory substitute.

Sincerely yours,

Director, Office of War Mobilization and Reconversion.

George T. Collins, M.A.I.C., has been appointed assistant manager of market research of the Pennsylvania Salt Manufacturing Company, Philadelphia, Penn. Mr. Collins was formerly with the Barrett Division of Allied Chemical and Dye Corporation.

The doom of any nation is sealed in this world today when research lags or falters.

—Gustav Egloff.

A.I.C. Annual Meeting 1946

Details of the program for the Annual Meeting of THE AMERICAN INSTITUTE OF CHEMISTS, to be held in New York, N. Y., May 17th and 18th, will appear in the April issue of THE CHEMIST.

This issue will also contain the program for the presentation of the INSTITUTE'S Gold Medal to Mr. Robert Price Russell, president of Standard Oil Development Company, on May 17th.

Invitation

The American Society of Mechanical Engineers cordially invites the members of THE AMERICAN INSTITUTE OF CHEMISTS to attend the March 27th meeting of the Heat Transfer Division of the Metropolitan Section of the Society, to be held at 29 West 39th Street, New York, New York.

Dr. Harvey N. Davis, president of Stevens Institute of Technology, is Honorary Chairman. Speakers are Mr. J. W. Spiselman, consulting engineer, who will discuss "Heat Transfer in Modern Chemical Dehumidification"; and Mr. F. M. Weaver, consulting engineer, whose subject is "Physical and Germicidal Properties of Triethylene Glycol as Used in Air Conditioning and Air Sterilization." The meeting will start at seven-thirty p. m.

National Research

Eduard Farber, F.A.I.C.,

Chief Chemist, Timber Engineering Company, Washington, D. C.

The subject of national research has been widely discussed since proposed legislation has been introduced into Congress "to create a National Science Foundation." The constant revision and re-introduction of compromise bills has brought forth much comment on various phases of the proposed legislation, but few papers have been of such fundamental nature as this one given at a recent meeting of the Washington, D. C., Chapter of the INSTITUTE. THE CHEMIST is the chemists' forum, and therefore Dr. Farber's thought-provoking article is presented here for the consideration of all chemists.

THE impact of science on the conduct of this war has been so great that our legislators have found it necessary to propose new laws for National Research. Extensive hearings have been held on the basis, and even on the details, of such legislation. The American Chemical Society has published a statement of its corporate attitude toward the research bills. Since much thought has been given to this matter, one might feel that everything was going to be worked out in the best possible manner.

If this were really true, our discussion would not be necessary. As it is, I am deeply distressed to see that a great opportunity may perhaps be missed and that a great plan has found a short-sighted and narrow-minded response.

Many of the witnesses and the published testimony give this definite impression. With rare exceptions, the attitude toward this proposed national legislation has been as though it were an offer of some money for research, and nothing more. Knowing that more results could be produced, and produced more quickly, with more funds, most of the chemists and physicists who went on record simply recommended or even urged that these

funds be made available to them, but not for other research projects such as those in the social sciences. These men seemed to believe that their duty was to secure means for the continuation of their work and for the training of students in such work.

I do not doubt the sincerity of these men and their honest concern with their specialized work. What I deplore is that they are responding as specialists to a national project. They have failed to understand the difference between a private endowment and a plan of national importance.

In his testimony, Maury Maverick remarked: ". . . when the scientists come out of their sacred bunkers, and associate with us common people, we will have a greater America than ever before."

This is certainly true, if it means more than condescending to a popularized explanation of special facts explored by science; and if, instead, it means bringing the scientific attitude to the understanding and directing of the life of "common people." This is the purpose and the obligation of science. The proposed science legislation is the opportunity to fulfill this duty. The aim of national research is not to bring into being a more efficient fractionating column nor a new acid-resisting alloy. This has been and should continue to be within the scope of departmentalized research.

When the scientists come out of their sacred bunkers, it is not only to advise the small manufacturer concerning the most suitable lubricant for a special job. The scientists have a more fundamental contribution to make to our national life. If we have ever doubted it, the present strife between labor and management can convince us that the basis of our production machinery is still the human being. The basis for national preparedness for any emergency is the same. Basic research is not only incomplete, but inefficient on a national scope, if it does not include the "science of human relations." We must have the courage now to broaden scientific methods which have demonstrated their efficiency in developing the airplane and radar, so as to embrace and if possible clarify the complexities of feelings and values.

We must do that because up to now all our scientific work has been entirely useless to protect mankind from the greatest of all diseases: War. There may have been an excuse for this failure. Science not only had to get certainty in itself, but also had to gain general acceptance and confidence. This has been achieved. Research has become the recognized basis for new developments in business, to such an extent that it is now being used as an advertising value. If we allow it to remain on this level, we shall have lost the greatest of all opportunities for converting specialized science into practical force in our national life.

One purpose of National Research should, therefore, consist in studying the application of the methods of science to our national life.

This would mean, for example, that our discussions of the relationship between higher wages and expanded purchasing power would cease to be on the scientific level of the darkest middle ages. In establishing accuracy and fundamental understanding in such discussion, scientific research would result in much greater general benefits to the nation than could be expected from any new apparatus or chemical substance. If such research belongs under the heading of social sciences, then social science research is more necessary to increase production than any new electronic device for sorting balls for bearings. Such a device does not require national research for its development. Our labor-management conferences break down because they have no national research from which to start.

I introduced this as an example. It is by far not the whole story of the necessity for social science research. The attitude toward production work, living conditions, and what F. R. Moulton called "moral objectives" should be included in such research. In Harlow Shapley's words: "Utilization of the experiences of the past for the creation of better experiences for the future," or, as Harold Smith (Bureau of the Budget) said: "Our knowledge of individuals and the way we organize what comes from research in the social sciences is as essential for the conduct of war as for the maintenance of peace."

We need national research for this work if it is going to consist of more than occasionally collecting some isolated facts. The difference between unrelated and inconsequential fact-gathering and a courageous attempt at improvements can come from nation-wide, unbiased, scientifically accurate and systematic investigation. In another dimension too, this research will have to be wider than would be possible without national support, namely by including everything that physics, chemistry, medicine and engineering can contribute. Collaboration among all these branches of science is not something to be added to the specialized research by an administrative coordinating board. The coordination should begin at the roots. Difficult as this may be, it represents the new approach which shall characterize this new national science.

Too many of the witnesses in the hearings were considering the science bills as a means of perpetuating military preparedness through research. We have won the war, not through systematic preparation and basic planning, but through a series of chances. We had many narrow escapes. The fate of our world depended not only upon courage, endurance, resourcefulness, heroism—these were found on both sides—but on unforseen develop-

ments. The basis for much of the testimony was that from now on, we want to be prepared, always. Nevertheless, Senators Fulbright and Kilgore occasionally stressed that prevention of war is necessary, and H. J. Curtis (Association of Oak Ridge Scientists) stated:

"Under an international control of armaments we in this country as well as the people of all countries, would be able to devote our full energies to the development of all the peaceful aspects of science and industry without the continual threat of sudden death. Atomic power could be developed for the good of mankind instead of its destruction. Under this system the scientists could and would work willingly and freely. Contrast this with the present situation which requires us by force of moral pressure and the instinct for self-preservation, to develop one of the greatest discoveries of all time into an instrument for mass murder. Our conscience rebels against a social system which makes this necessary."

However, prevention of war through treaties and laws has failed up to now. If we want to substitute preparedness for war by effective prevention of war, we have to find a new method. This is the greatest, and admittedly most difficult, of a new venture in National Research: *To investigate the causes for wars and to develop means for their prevention.*

The Combined Production and Resources Board estimates that Great Britain lost about £1,200,000,000 of national wealth through enemy attack; the loss in investments amounted to more than £4 billion. How much the loss of human life and human future amounts to in money is inexpressible. To state that war has always existed and will continue to exist is about as sound as to say that witch burning and cruel superstition have existed and will, therefore, continue to exist.

Science has been used for the prosecution of war. We should now start to use it for the eradication of war. Science has proven that death through diphtheria is unnecessary, let us now lay the foundation for the proof that death through war is obsolete!

We need research on a national basis to accomplish this. It should start at the level of individuals, and through the understanding of the biological basis for life, reveal the human race as the delicate results of natural development. It should continue from there to the nature of groups of humans, and that of nations and nationalism. It should be unafraid of any results that may come out of research into the causation of wars, and it should proclaim in scientific language the disaster which is the result of wars.

Most of all, this research should demonstrate that honor and recom-

pense for devotion to the nation can be gained in peace.

This is not an attempt to outline a program for national research on the prevention of war, only an indication of the tremendous amount of coordinated, basic, and free scientific work needed for the continuation of human existence.

We are proud of our specialized research work, of the favorable relationship between expenses and returns. Why do we not utilize the experiments in human, international living which have cost us incomparably more? Why do we not try to show that science now, late but not too late, can bring us some return for the expense of these events?

There is not much to worry about in handling the patents that may come out of such national research. In the discussions of the science legislation, the problem of patentable invention has found a wide variety of suggested solutions. Unity of opinion was restricted to the desire to make available to all, the developments for which the Government has paid. This sounds perfectly justified, but let us consider what Vannevar Bush had to say about it:

". . . When Government receives a patent today in its hands, what does it do? It effectively destroys that patent. It licenses, ordinarily, all comers at no royalty . . ."

R. J. Dearborn recommends to ". . . eliminate it entirely from this bill, because Government should interest itself only in basic research . . ."

The difficulties in establishing a just balance between Government expense in developing patents and their return to public ownership have been pointed out in the hearings. Since these patents would become known internationally, it would be required to cover all important foreign countries with patents and administration for them, if the balance is to be assured.

The basic research which I urge as the purpose of a National Research Foundation is of a nature which brings more results the more it is imitated and used outside of the United States.

Science has grown up, in the many centuries of fighting against superstition and struggling to gain its bearings. Now, it has to shoulder the responsibility for helping to conduct our civilization and to save humanity. In the years between 1933 and 1939, many warnings were sounded concerning the developments in Germany. They were not heeded. Catastrophe was the result. Now we are again warned. We must listen and act this time. The proposed legislation on science gives us our chance to do our part.

I recommend that THE AMERICAN INSTITUTE OF CHEMISTS submit to its Fellows and Members, for discussion and final wording, these sug-

gestions to be included in the science legislation:

1. The purpose of National Research shall consist in studying the application of the methods of science to our national life.

2. The field of National Research shall comprise the investigation of the causes for wars and the development of means for their prevention.

Necrology

Frank R. Eldred

Frank R. Eldred, director of research of Reed and Carnrick, Jersey City, New Jersey, died April 15th at the age of seventy-one.

He was born in Ligonier, Indiana, and was educated at Purdue University, receiving the B.S. degree in 1898. In 1901 he joined Eli Lilly and Company, becoming chief chemist and director of the Scientific Division in 1909. In 1913, the Medico-Chirurgical College of Philadelphia awarded him the Phar.D. degree. From 1920 to 1924 he acted as consulting chemist and chemical engineer. In 1924 he became director of research of Reed and Carnrick.

Dr. Eldred specialized in biological and pharmaceutical chemistry and manufacturing apparatus and plant equipment. He was noted for his work in medicinal and food products, and in endocrinology. He was active in the American Chemical Society, the American Association for the Advancement of Science, the American Pharmaceutical Association, and other societies. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1929.

Bernard Salkin

Bernard Salkin, chief chemist of Associated Brands, Brooklyn, New York died of a heart attack on October fifth, at the age of fifty-one.

He was born in New York, N. Y., and received the B.S. degree from the College of the City of New York in 1914, followed by graduate work at that school and at New York University. His varied experience included five years as chief chemist for E. R. Squibb and Sons; two years in the medical laboratory of the U. S. Army; independent consulting work; two years with Travis Colloid Research Company of New York, and ten years in the chemical laboratory of the Brooklyn Navy Yard.

He was the author of a number of technical articles on pharmaceutical subjects, and specialized in pharmaceuticals, cosmetics, and manufacturing problems. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1923.

The Profession of Chemistry

R. J. Abernethy, F.A.I.C.

Los Angeles County Coroner's Office, Los Angeles, Calif.

Reprinted from *The Register,* Phi Lambda Upsilon, March, 1945

DURING recent years, but more pointedly during these war years, the chemist has given thought to his profession. His concern has not just been during labor relations controversy and war emergency, but rather it has been apparent for many years that, in spite of the best academic training, the chemist has been at a professional disadvantage in many kinds of situations. Just the word "professional" is so far afield from his vocabulary and approach that, instead of understanding this fact, he has experienced extremes of indignation and pessimism because his deserving achievements are not better rewarded. However, there has developed the idea that technical skills alone do not make a profession and that in competition with other skills there is lacking a vast amount of coordinated activity to set the stage and atmosphere for the pursuit of the technical skill. The competitor has such assistance. This realization is not so recent but that there have developed a number of attempts to overcome the handicap, but efforts are still meager and too few. Quite apparently the active groups are as yet too small to be felt and attempts at publicity to further their cause is dismissed as of "local interest." Chemists generally are not yet aware of the problem.

The purpose of this discussion is not to list the quite considerable number of small groups contributing to the chemist's cause, but to call attention to the long list of activities of the competing professions and to point out that such activities are not intrinsic to the performance of their skills. Furthermore, any group, including the chemists, can make use of these adjuncts. To meet competition every assistance possible should be used in practicing the profession, but to initiate a program, certain things are preeminently firsts, after which the others follow in quick and easy succession.

The initiation of a professional program meets with difficulties because the chemist has basically been a technical man not given to cooperative enterprises involving much public contact. His training has not been professional. He has been drilled in sub-

scriptions and not continuous membership in his professional society. Consequently, when face to face with an employment contract, a labor relation controversy, or professional competition of any kind, he is unprepared by training and mental attitude to cope with the situation and the discussions are in a strained, unnatural atmosphere.

The difficulties thus developed have made the chemist ask, what is a "profession" and "professional program?" The usual dictionary source does not suffice even though one includes "chemist" as an example, because only the skill is indicated. To repeat then, for an actual definition of a profession one must take the common practice of the several recognized skills, and as a consequence of such practice, the professions. A rounded program makes and defines the profession. Of course, there is the academic training, but there is also the training to work together in so many devious ways that it is hard to see where one ends and the other begins. Altogether they spell and explain professional solidarity.

Of course some groups, such as law and medicine, have not only generations of experience but hundreds of years, and their activities have the matured finish which only years and trial and error can give. As the study is extended to other groups there soon develops the realization that there is a similarity, and while it is not easily apparent and it need not be determined whether the similarity comes by mere copying or by independent experience, the fact remains that each successful and truly professional group has a program bearing much similarity to all the others and each takes care of a number of problems in much the same way.

To study all the activities of all the professions would be a project worthy of some special notice. But in part, a composite of the major practices, methods and projects on which they are working and continually emphasizing (for convenience called "Professional Activities"), shows the following:

Educational standards at one single attainment level.
Coordinate teaching and practice.
Development of the profession and not just technicians.
Technical journals, etc. Many specialty journals.
Coordinated profession.
Certificate of proficiency for public display.
Title indicates profession.
Statute definition.
License and professional membership concurrent.
Entrance at one level with full professional equality.
Absence of unqualified "associate" member.
High membership per cent.

New members only through local group but on national standards.

Membership roster of jurisdiction.

Roster open to public.

Mail address shows technical and professional connection.

One professional society (regardless of specialty or subscriptions).

Dues and budget sufficient and separate from technical subscriptions.

Local news bulletin.

Executive secretary

Code of ethics.

Library only for profession.

Refresher courses.

Equipment index for rapid filing.

Master subject index.

Coordinated telephone listings.

Local employment office maintaining professional level.

"Seal of approval" activity.

Employment contracts.

Liability insurance.

Public relations.

Advertise profession.

Coordinate activities.

Cooperate with other professions.

Legislative committee.

Maintain and enhance status by state laws.

Civic duties, service clubs, public service.

Regulations for unethical or unlawful practice.

Lay magazine to public with lay article but primarily to build professional status.

House organs which develop professional status as well as advertise product.

Literature sent to the specific professional man and not to "company" or "president."

Strong local autonomous group prosecuting active professional program.

Large representative executive council.

Lack of financial or other competition between national and local groups.

The above list is the working formula of a profession. It discloses that while technical skill and advancement are provided, the program as a whole carries many items which are not intrinsic to any particular skill, but rather, they give depth, coordination, solidarity and security, which in turn, enhance the technical skill. These extra-curricular, non-technical activities, we begin to appreciate, are truly professional in nature and, in the final analysis become a continuous, repetitive, sincere and honest effort to build and maintain public good will and prepare, in advance, an atmosphere for the need of the technical skill and also, with equal importance, at a professional level. A review of the "Professional Activities" leaves no doubt or secrecy but that it is systematically obtained and that other groups following a similar pattern

have good probability of reaching the same goal.

The chemist's approach to his own professional problem then is a critical, methodical study of the successful professional organizations—membership, legal status, licensing, code of ethics, budget, dues, committees, advertising, telephone listings, public relations, publicity, legislative activity, and how they influence public thinking. Such a study shows that the chemist can be equally successful by following an already seasoned and chartered course, provided he is guided by optimism during the early stages. This will be followed by accelerated progress when customs so dear to his heart are dropped by the way.

That false tenets exist is shown, for example, by the fact that the words "profession" and "professional activity" do not have purposeful meanings. Another example is in the chemists' many "memberships," when what really exists is subscriptions to technical journals, even though the publishing organization may be on a membership basis. Another difficulty is the individual's non-responsibility attitude with the feeling that nothing can be done. Actually, many good ideas have been expressed in public, which need only the sense of responsibility to bring them to life.

But the chemists' professional status has progressed to some extent in spite of complaints to the contrary, because surely at the top of the list belongs the machinery to keep the skill at its best after initial academic training. Such machinery is professional in nature by the new understanding of such, but the information contained therein is technical. The American Chemical Society is truly performing this service, and furthermore, at such a high technical level that it is second to none. All the skills acknowledge the service and pay a well-deserved tribute. However, high technical skill alone does not constitute a profession.

Other progress of note is the program of THE AMERICAN INSTITUTE OF CHEMISTS which is carrying the professional side of chemistry, and its local chapters which have increasingly spread the seeds of professional consciousness. Local groups of both societies have additional projects which are gathering weight. Detroit has done good work on its roster, and Los Angeles and Chicago are having forum discussions to develop activities. Other localities are also active, but the base is too narrow and chemists generally are still slow to accept that self-responsibility needed to make progress in any field of endeavor.

The chemist then comes to the final conclusion that certain specific projects must be started at once and continuously and vigorously prosecuted. The following should be initiated:

1. The professional approach must be developed parallel to academic

training so that the chemist is not only technically proficient but knows that he is entering a profession and not just a skill. He should not have to change his ideals when circulating among employed chemists. He should join the professional society immediately and maintain it to the credit of his university and its training, and to his own professional self-respect and solidarity and continued technical level. Technical subscriptions are on a separate basis but sufficient to take care of his current needs.

2. A collection of exhibits should be made to demonstrate to chemists the standing of other professions and to serve as a pattern for group and individual activity.

3. Provide a local roster of all chemists, employers, and all firms using names with any chemical implication. Be little concerned when listing the sub-professional, but much concerned with complete coverage. Better definitions will come later. This project, above all, provokes individual cooperation and the file should be open to all. It is the stepping stone to many other activities.

4. Raise the sights on dues and budget, expecting to pay a little higher due to years of inactivity, and meet at least the average of competing professions.

5. Carry a professional program sufficiently broad to give everyone a chance to work to his liking and to accomplish the final purpose. The individual effort should be consistent and sustained, but not burdensome. All pertinent information about the jurisdictional area should be thoroughly known and membership should not be names to pad a mailing list. Committees should be large and include every volunteer. Published ideals and purposes do not constitute a program. They must be implemented.

6. Look forward to a paid nonchemist executive secretary to take care of office detail and act as secretary on a level comparable with chemist officers, but not to determine policy or represent chemists on technical matters. (The executive secretaries have their own professional society and high standards.) Employ stenographic help as soon as possible. Look forward to a professional, self-supporting organization and not one of volunteer, catch-as-catch-can donations. Do not pay for chemical experience and knowledge when so many members are willing to act as executive officers. Pay for supplemental services and the execution of policy.

7. Establish in one's own mind that chemistry is a profession and let this fact guide all contacts not only with the public but with chemist associates as well. This alone is the major step in implementing the whole professional program.

The above list is a beginning and not a finished program. There are extensions possible in many directions

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as the Professional Activity list indicates, but a distinction must be drawn between the past, the formative stage, and the future. In the past many editorials and inspirational articles have been written, (1) on the sorry fate of the chemist, (2) the favorable position of some other group, (3) that something should be done, (4) that they (third person indefinite) should do something, (5) that now is the chemist's chance to "make hay." This period in literature must be a thing of the past. Constructive suggestions only deserve valuable circulated space and must point to the reader, and not third person indefinite.

This brief paper is an attempt in that direction, with the hope that future discussion will be constructive to develop and maintain a profession worthy of public acclaim and esteem.

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Fischer Honored by Miami Valley Chapter

Dr. Martin H. Fischer, F.A.I.C., College of Medicine, University of Cincinnati, has been chosen to receive the Award of Merit for "distinguished service to the science of chemistry and the profession of chemist in America," an annual award made by the Miami Valley Chapter of THE AMERICN INSTSTUTE OF CHEMISTS. Dr. Fischer is well-known for his work in the chemical aspects of medicine, and for his contributions to colloid and physiological chemistry. Presentation of the award will take place in Cincinnati at a meeting and banquet of the Miami Valley Chapter to be held March 30th.

President Gustav Egloff spoke on December fourth on "Synthetic Rubber" before the Chicago Engineers' Club. On December eighth, he addressed the Rocky Mountain Oil and Gas Association at its annual convention in Casper, Wyoming, on "Peacetime Petroleum Products," and three days later, he spoke on this subject before the Wisconsin Petroleum Association Convention at the Schroeder Hotel, Milwaukee. "New Things for More People" was the subject of his talk at the Fifty-second Annual meeting of the Ohio Chamber of Commerce, in Columbus, Ohio, on December thirteenth.

Ohio Society of Professional Engineers Approves Chemists' Act

The Board of Trustees of the Ohio Society of Professional Engineers, on recommendation of its Legislative Committee, has unanimously approved the proposed Chemists' Registration Act of Ohio (See THE CHEMIST, February, 1946), which has been sponsored by the Ohio Chemists' Committee on Professional Practice. The bill was prepared by Dr. E. L. Luaces, F.A.I.C.

John M. Weiss, F.A.I.C., spoke before a joint meeting of the Western New York Section of the American Institute of Chemical Engineers and the Niagara Chapter of the New York State Society of Professional Engineers, held on January 29th in Niagara Falls, New York, on "Professional Problems of Chemical Engineers in Relation to Licensing." Dr. Weiss also addressed the student chapters of the American Institute of Chemical Engineers at Cooper Union, New York, N. Y., on February seventh, on the subject of "Engineers' Unions." On the preceding day a representative of the CIO Federation of Architects, Engineers, Chemists, and Technicians, had addressed this group, and Dr. Weiss's talk was in rebuttal of the idea of unions insofar as professional engineers are concerned.

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January Meeting

The 225th meeting of the National Council of The American Institute of Chemists was held on January 29th, at The Chemists' Club, New York, N. Y., with Vice President Donald Price presiding.

The following officers and councilors were present: Messrs: S. R. Brinkley, F. A. Hessel, D. B. Keyes, R. E. Kirk, J. M. McIlvain, R. J. Moore, E. H. Northey, D. Price, M. Toch, and L. Van Doren. Mr. H. S. Neiman, Mr. Arthur Schroder, Mr. T. S. McCarthy, and Miss V. F. Kimball were present.

The minutes of the previous meeting were approved.

The Secretary reported that, in accordance with instructions given at

the previous meeting of the Council, letters had been sent to various officials of the City of New York, to the New York Municipal Chemists, and to the New York Municipal Civil Service Commission informing them that the INSTITUTE recommends that the proposed classification of municipal chemists should be similar to the Federal classification of chemists. A number of acknowledgments have been received, informing us that these recommendations will receive consideration.

The Secretary presented a number of letters:

(1) The suggestion that the INSTITUTE might find it acceptable to advertise in a suitable journal was referred to the Committee on Membership for consideration.

(2) An invitation from the Medical Society of the State of New York to join its campaign concerning the anti-vivisection bill before the State Legislature was referred to the New York Chapter of the INSTITUTE.

(3) An investigation by the Executive Director of employee benefit plans which might be of interest to the staff of the INSTITUTE was referred to a special committee consisting of the Treasurer, the Executive Director, and the Secretary.

(4) An invitation from the American Academy of Political and Social Science of Philadelphia to send a representative to its April fifth and sixth meeting in Philadelphia was referred to the Chairman of the Pennsylvania Chapter.

(5) An invitation from Washington University, St. Louis, Missouri, to send a representative to attend the inauguration of its president on February 22nd was referred to the Secretary, who will notify the representative suggested by the Council.

(6) Correspondence regarding the Proposed Federal Civil Service Classification was discussed, and upon motion made, seconded, and carried, it was decided to defer action on this matter for financial reasons.

(7) The Constitution and By-Laws of the New Jersey Chapter were found consistent with those of the national organization, and were approved.

The Treasurer's report was accepted.

Mr. Schroder reported progress in the work of the INSTITUTE.

It was decided to order 5000 reprints of Dr. Egloff's article on the registration of chemists, which will appear in the February tenth issue of *Chemical and Engineering News*.

Copies of the report of the Committee on Employer-Employee Relationships are to be mailed out to colleges and chemical laboratories.

Dr. Moore, as chairman of the Committee on Annual Meeting Arrangements, reported that the Annual Meeting of the INSTITUTE will be held in New York, N. Y., on Friday and Saturday, May 17 and 18th,

and discussed the tentative program for the meeting.

Dr. Price, as chairman of the Committee on Membership, reported that a drive for 1000 members by May is under way.

The following new members were elected:

Fellows

Bateman, Robert L.,

Manager, Fine Chemical Division, Carbide and Carbon Chemicals Corporation, 30 E. 42nd Street, New York 17, N. Y.

Bartels, Charles R.,

Captain, Chemical Warfare Service Technical Command, Building 330, Edgewood Arsenal, Md.

Cefola, Michael,

Microchemist, Socony-Vacuum Oil Company, 412 Greenpoint Ave., Brooklyn 22, N. Y.

Cifelli, Thomas, Jr.,

Patent Attorney, Givaudan-Delawanna, Inc., 330 W. 42nd Street, N. Y. 18, N. Y.

Creelman, George D.,

Research Director, M. A. Hanna Co., Leader Bldg., Cleveland, Ohio.

Damitz, Frederick M.,

President and Technical Director, National Varnished Products Corp., 211 Randolph Ave., Woodbridge, N. J.

Frey, Samuel S.,

Chemist, Oakite Products, Inc., 22 Thames St., New York 6, N. Y.

Garber, John D.,

Research Chemist, Standard Oil Development Company, Linden, N. J.

Goff, Melvin H.,

Department Head, Chemical Manufacturing Dept., Burroughs Wellcome and Co., Inc., 1 Scarsdale Road, Tuckahoe, N. Y.

Gordon, Samuel M.,

Vice President, Director of Research, Endo Products, Inc., 84-40 101 St., Richmond Hill 18, N. Y.

Hazlehurst, Edward,

Chemical Engineer, Western Electric Company, 403 Hudson St., New York, N. Y.

Hobson, Edwin L., III,

Chief, Plastic Section, Research and Development Branch, Office of the Quartermaster General, Washington, D. C.

Leuck, Gerald John,

Director of Research, Glyco Products Company, Inc., 230 King Street, Brooklyn, N. Y.

Nickerson, Walter J.,

Assistant Professor, Botany and Bacteriology, Wheaton College, Norton, Mass.

Nunziata, Gennaro P.,

Chief Chemist, J. L. Hopkins and Company, 220 Broadway, New York, N. Y. (Plant: 47 Keap Street, Brooklyn, N. Y.)

Piel, Elmer V.,
Chemical Sales Promotion, Barrett Division, A. C. and D. Company, 40 Rector Street, New York, N. Y.

Ridgway, Raymond R.,
Associate Director of Research, Norton Company, Box 87, Niagara Falls, Ontario.

Sample, Albert B.,
Biochemist, Smith, Kline and French Laboratories, 800 North Delaware Ave., Philadelphia 23, Penna.

Sharpe, Paul David,
Research Chemist (Rubber), Socony-Vacuum Oil Company, 412 Greenpoint Ave., Brooklyn, N. Y.

Stahl, William H.,
Research Group Leader, Foster D. Snell Inc., 305 Washington Street, Brooklyn, N. Y.

Story, Enoch F., Jr.,
Instructor in Chemistry, Rhode Island State College, Kingston, R. I.

Tutwiler, T. Stanford.
Research Chemist, Standard Oil Development Company, Research Division, P. O. Box 243, Elizabeth B, N. J.

Members

Ainsley, Edward J.,
Analyst, Oakite Products, Inc., 22 Thames Street, New York 6, N. Y.

Dhonau, Charles J.,
Professor of Embalming and Chemistry, Cincinnati College of Embalming, 3202 Reading Road, Cincinnati 29, Ohio.

Fasig, Robert L.,
Chief Chemist, The Ashland Malleable Iron Company, Ashland, Ohio.

Fink, Albert O.,
Research Engineer, Chemical Developments Corporation, 1771 Springfield Street, Dayton 3, Ohio.

Hyypia, Jorma,
Research Chemist, Oakite Products, Inc., 22 Thames Street, New York 6, N. Y.

Kleinsinger, Harold,
Professor of Analytical Chemistry and Physics, St. John's University, 96 Schermerhorn Street, Brooklyn, N. Y.

Pyne, Marjorie,
Chemist, Oakite Products, Inc., 22 Thames Street, New York 6, N. Y.

Associate

Hooper, Ralph E.,
Research Chemist, Oakite Products, Inc., 22 Thames Street, New York 6, N. Y.

Raised From Associate to Fellow

Smith, Merton B.,
Production Manager, Allied Ashphalt and Mineral Corporation, South 2nd Street, Dunellen, N. J.

Jackson at University of Alabama

Kirby E. Jackson, F.A.I.C., formerly with West Virginia Pulp and Paper Company, Corington, Virginia, is now on the faculty of the University of Alabama, Tuscaloosa, Alabama.

CHAPTERS

Baltimore

Chairman, W. H. Hartung *Vice-chairman,* Rev. E. S. Hauber, S. J.
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3816 Greenmount Ave.,
Baltimore 18, Md.
Council Representative, Maurice Siegel
Alternate, J. F. Muller
News Reporter to THE CHEMIST, Ralph Lamenzo

The Chapter held a meeting on January 17th at the University of Maryland. Dr. Walter H. Hartung spoke briefly of the plan to cooperate with the Maryland Section of the American Chemical Society in their discussion on "Registration of the Chemist in the Maryland Free State" on March 29th.

Mr. E. M. Hanzely resigned as temporary Secretary-treasurer, and Mr. J. B. Edmonds was elected Secretary-treasurer.

Dr. George B. Hager, assistant professor of chemistry, University of Maryland, spoke on the "Hormones of the Adrenal Cortex."

The relation of the adrenal cortical hormones to the other steroids was discussed and a correlation between chemical structure and physiological effect was made. These theoretical considerations were supplemented by a survey of the physiological and pharmacological properties of the cortical hormones and their clinical applications.

Mr. Sheppard T. Powell, of the Maryland State Board of Registration of Engineers and Surveyors, was announced as the speaker for the February 28th meeting.

Pennsylvania

Chairman, Harold A. Heiligman *Vice-chairman,* Harold M. Olson
Secretary-treasurer, Kenneth E. Shull
Philadelphia Suburban Water Company
762 Lancaster Avenue, Bryn Mawr, Penna.
Council Representative, John M. McIlvain
News Reporter to THE CHEMIST, John H. Staub

The Pennsylvania Chapter met December fourth, at the Engineers' Club, Philadelphia, Penna. Mr. Harold Heiligman, chairman, presided.

The speaker of the evening was Dr. Walter Baeza, consultant, Industrial Research Company, who discussed the theory and application of powder metallurgy.

Dr. Baeza stated that it was not the large volume but the type of pro-

duction that is important in powder metallurgy. Only twenty tons of copper and twenty tons of iron are used daily in this industry.

The use of powder metallurgy in converting tungsten from powder to wire saves the public three billion dollars yearly on its light bill.

The use of tungsten carbide tool tips saved considerable manpower and time during the war. An example can be found in shell manufacturing, where, by the use of these tips, the manpower requirement was cut to one-sixteenth.

The speaker next described the steps of the molding process, and stated that within certain limitations this process could be substituted for the machining process in the production of small parts. It is much simpler to operate and requires practically no skilled labor.

The limitations in the use of the molding process are: (1) no undercuts possible; (2) no angles desirable; (3) no deep splines and (4) the limit of the cross-section to height is 3:1.

In general, the parts made by powder metallurgy are 80-95 per cent as strong as those made from metal, but they can be made much stronger.

Powder metallurgy can produce cheaper the same products which can be made by conventional methods.

After a short discussion period the meeting was adjourned.

A meeting of the Chapter was held February 5, 1946, at the Engineers' Club, Philadelphia, with Mr. Harold Heiligman, chairman, presiding.

The speaker was Dr. Roy K. Marshall, Director of the Fels Planetarium, who spoke on the topic, "Atomic Energy."

Dr. Marshall stated there is about as much uranium in the world as there is copper. Deposits of radioactive material have been found in the United States, Canada, Czechoslovakia, India, and the Belgian Congo. Undoubtedly other deposits exist which remain to be discovered.

Solving the problem of purifying uranium was a great asset in the production of the atomic bomb.

The greatest peacetime application of atomic energy will probably be in the field of power generation, especially in sections of the country where no natural resources, such as coal or water, are available. The use of atomic energy to power automobiles will not come about in our time.

Another peacetime application of atomic energy is the use of radioactive elements in the treatment of disease. An example of this is radioactive phosphorus, which has been successfully used in combating leukemia.

Dr. Marshall next described the process for the production of plutonium^{239}. The process consists of subjecting uranium^{238} encased in aluminum in a graphite pile to neutrons ob-

tained from the action of radium on beryllium.

Uranium$_{238}$ is susceptible to fast neutrons, and when one lodges in it, the uranium$_{238}$ is tranformed into uranium$_{239}$, which is unstable, having a half-life of 23 minutes. Uranim$_{239}$ by the ejection of a beta particle transforms into neptunium with a half-life of 2.3 days, and then by the ejection of a beta particle yields plutonium$_{239}$ with a long half-life.

The plutonium$_{239}$ must be removed at this point, otherwise further bombardment by neutrons will cause a fission to occur, which will yield as one of the products a considerable quantity of energy.

This must not be allowed to happen; hence a very accurate control of the process must be maintained at all times.

After a discussion period the meeting was adjourned.

Chicago

Chairman, H. R. Kraybill — *Vice-chairman,* F. B. Burns

Secretary-treasurer, Charles L. Thomas
Great Lakes Carbon Corp.
3210 Austin Ave., Morton Grove, Ill.

Council Representative, Martin de Simo

A meeting of the Chicago Chapter will be held Friday, March 29th, at Huyler's Restaurant, 310 South Michigan Avenue, Chicago, preceded by dinner at 6:15 p. m. Dr. Otto Eisenschiml will speak on "What's Wrong With Our Chemical Societies?" followed by discussion started by a panel representing several organizations. The program is designed to develop two main points: (1) What functions the chemist at the present time requires of his professional organizations; (2) To what extent the present organizations fufill his needs.

Reservations may be made to Dr. C. L. Thomas, Great Lakes Carbon Corporation, Morton Grove, Ill., or to Mr. G. T. Tobiasson, Universal Oil Products Company, Riverside, Ill. Seats will be available for those who do not attend the dinner. Non-members are welcome.

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PAINT, PAINTINGS AND RESTORATION. By Maximilian Toch, F.A.I.C. Second Edition, *D. Van Nostrand* Company, New York, N. Y. 149 pages, 5½" x 8" $5.00.

Dr. Maximilian Toch who is artist, chemist, paint manufacturer, and nationally recognized expert on the authenticity of paintings, brings all his life-long experience to a focus in this edition. The most interesting fact in connection with this book is that its subject matter is a hobby of the author's—a hobby which he publicized for the first time in 1915 and which now has become standard practice. Dr. Toch, in addition to being a well-known art expert, is the head of a very large and old firm of paint and varnish manufacturers. His understanding and authoritative knowledge of the subject have been gained through his more than fifty years' experience in the manufacture of large quantities of painting materials.

In this edition, the author's pleasant, almost conversational style, has been preserved. The technical data on the composition of the many paints discussed, and the information on their preparation and use have been brought to date. The modern scientific methods and means employed for the identification of famous and genuine paintings, and also the concomitant exposure of frauds are discussed with a candor that almost sends shivers down the spines of all owners of paintings. They make one wonder if the services of a crime detection laboratory should be engaged before making the next purchase!

Throughout the book, one is impressed by the progress that has been made through the application of science to this quondom art. Dr. Toch might almost have entitled this edition, "Paintings as the Scientist Sees Them."—A. S.

German Industrial Plants

The State Department and the Office of International Trade, Department of Commerce, recently released a second list of twenty-nine German industrial plants which have been declared available for allocation on the German reparation account by the Allied Control Council.

American firms or persons interested in acquiring any of these plants should communicate with the Office of War Areas Trade, Department of Commerce, which will furnish available information. Plants listed produce chemicals, propellants, airplanes and parts, ball bearings, explosives, ammunition, etc.

MODERN DEVELOPING METHODS. The Edwal Laboratories, Chicago. 3rd Edition, 1945. 138 pp. 5" x 7½" $0.50.

This comprehensive handbook of the know-how on the latest methods of developing prints and fine grain photographic negatives is a welcome addition to the desk of the research man who must accurately record his observations via photography as well as to the amateur photographer.

Prepared by the technical staff of the Edwal Laboratories under the direction of Dr. Edmund P. Lowe, himself a chemist and a photographer of note, it contains the necessary concise yet clear manipulative directions; many valuable tables of developing times, film speeds, light meter characteristics, chemical equivalents of commercial developers, formulae, conversion tables, and similar data not elsewhere readily available. The extraordinarily fine cuts used to illustrate the text put this book in a class by itself. It is short, concise, readable and to the point.—A. S.

Schmeidler With Foster D. Snell, Inc.

Robert Schmeidler, F.A.I.C., has joined the staff of Foster D. Snell, Inc., 305 Washington Street, Brooklyn 1, N. Y., as business manager. He was lately Colonel with the Army Air Forces and served forty months in the Panama Canal Zone as Supply and Evacuation Staff Officer.

Atomic Structure Contemplated

To The Editor:

When I was a young student of chemistry, around 1900, it was in my mind that a residual change persisted in the elements which had taken place in a chemical reaction. This idea occurred to me long before we learned of the complex nature of the atom, which in my student days was considered the end point of matter. Now I am convinced that an atom, having participated in a chemical reaction, has been modified not only in the orbits of its electrons but in its nucleus so that it is not the same as it was before participation in the reaction.

I recommend in this "Atomic Age" that chemists and physicists should investigate to find out, if it is not true that in every chemical reaction, the nucleus of the atom is involved and in some way affected. Such nuclear modification would naturally be of an infinitestimal character and this fact alone would be sufficient reason for its having escaped observation up to date. There can be no doubt that chemical reactions which involve electrons in orbits in the outer shell of the atom must also in some way affect and modify the equilibrium of the nucleus. In this sense, every chemical reaction is a nuclear one, and could be likened to the effect that a change in size of a star or planet would have on the whole solar system.

I am submitting this idea to en-

courage study and further investigation in this direction, for a new field of chemical research may thus be opened. A new interpretation of chemical reactions and scientific data may be found. For example, the action of catalysts, which modify reactions and are again recovered without any apparent change may be explained on such "nuclear" basis.

—Dr. N. Sulzberger, F.A.I.C.

U-235

Scientists are stone-cutters
Chipping away with sharp wisdom
the dross of obscurity
So that the new fact may shine
Like a diamond
Many-faceted with implications
Of the truths to come.

Now see what they have done with
their chisels—
They have split the world!

Not much of the world at this telling
Only a few special atoms; we still
live
Not having resided in Hiroshima
Or Nagasaki.

With Greek logic and Egyptian
cunning
They have achieved fission
By forcing Nature to react upon itself.
By stripping inert isotopes from
Uranium 235
They have created a brief sun: We
used it to destroy
Ruthlessly, but in the name of freedom.

Let us not keep saying helplessly
"What now, scientists?"
Let us question each other.

Let us say
To Heads of State
To Foreign Ministers
To Politicians;
Find yourselves chisels, statesmen,
To chip away from each other
The dross of suspicion.

Call in the scientists—use them!
The great scientific minds from all
nations
To meet with you
To advise you;
They are the true internationalists
They like each other;
Talking the common language of
facts.

Together you must guide the world
Statesmen and scientists;
You must unite;
To flush the shimmering phoenix
From the glass of New Mexico
And the ashes of Hiroshima—
The eagle of brotherhood
From the souls of men.

—Robert Spencer Barnett, F.A.I.C.

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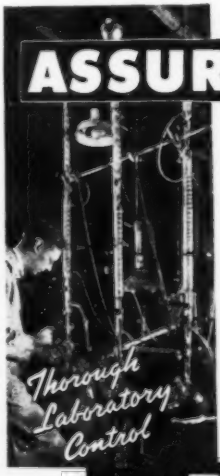

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Meeting Dates

Mar. (date to be announced). Miami Valley Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. Meeting in Cincinnati. Chapter Award to Dr. Martin Henry Fischer. See page 103.

Mar. 5. Pennsylvania Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. Engineers' Club. Philadelphia. Speaker: Dr. Gerald P. Wendt, editor, *Science Illustrated,* "World Wide Chemistry."

MAR. 22. New York Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. No. 2 Park Avenue. Dinner 6:30 followed by meeting.

MAR. 29. Chicago Chapter, THE AMERICAN INSTITUTE OF CHEMISTS. Huyler's Restaurant, 310 South Michigan Avenue, Chicago. Dinner 6:15 p. m. followed by meeting. Speaker: Dr. Otto Eisenschiml. Subjct: "What's Wrong With Our Chemical Societies?" Discussion.

Apr. (date to be announced). Miami Valley Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. Meeting in Columbus. Speaker, G. F. Deeble. "The Chemists' World".

Apr. 2. Pennsylvania Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. Engineers' Club. Philadelphia. Speaker: Walter J. Murphy, editor, *Industrial and Engineering Chemistry*. "The Chemist as Demobilized from the Armed Forces."

MAY 3 New York Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. No. 2 Park Avenue. Dinner 6:30 followed by meeting.

MAY 31. Chicago Chapter. THE AMERICAN INSTITUTE OF CHEMISTS. Huyler's Restaurant, 310 South Michigan Avenue, Chicago. Dinner 6:15 p.m. followed by business meeting.

June (date to be announced). Miami Valley Chapter. THE AMERICAN INSITITUE OF CHEMISTS. Student Medals presented to outstanding chemistry students in area.

The date of the National Chemical Exposition, to be held at the Coliseum, Chicago, Illinois, has been moved forward to September 10th to 14th, 1946. Dr. H. E. Robinson of Swift and Company, is chairman of the Exposition Committee of the Chicago Section of The American Chemical Society—sponsor of this event. The Exposition manager is Marcus W. Hinson.

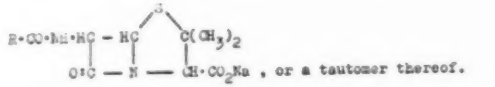
The sixth conference of the Institute of Food Technologists will be held March 18th to 20th at the Statler Hotel in Buffalo, New York.

The Fifteenth Southern Textile Exposition will be held at Greenville, S. C., April 8th to 13th.

Chemical Condensates

Ed. F. Degering, F. A. I. C.

The Probable Structure of Penicillin Is Now Believed to Be:



, or a tautomer thereof.

The hemorrhage tendencies of aspirin are masked by mixing it with vitamin K, according to U. S. 2,385,365, issued to Professor Karl Paul Link.

The United States, according to the Danish scientist Niels Bohr, could produce three kg. of uranium daily.

Chemical industry will spend $200,000,000 in the next three years on plant expansion, according to a recent estimate by the American Chemical Society, which attributes the need for the expansion to technological advances and current shortages.

Sunflower seed meal, according to Dr. Harry G. Day of Indiana University, is superior to corn-germ and wheat-germ meals as a source of B vitamins.

Cellophane, according to studies by Dr. G. Swartzman of Mt. Sinai Hospital, New York, catalyzes the production of penicillin.

A method for reporting the boiling points, densities, and refractive indices of paraffin and olefin hydrocarbons is reported in Research Paper RP1651 of the National Bureau of Standards.

Plans for postwar expansion include: $5,000,000 by Allegheny Ludlum Steel Corporation; $15,000,000 by Dow Chemical Company; $4,000,000 by Gaylord Container Corporation; $200,000 by Harshaw Chemical Company; $1,000,000 by Procter and Gamble; $100,000 by Woburn Chemicals, Ltd., and many others.

In terms of per capita consumption in the United States, paper is led only by water and milk.

The electronic vulcanization of rubber has been developed by French and Swiss inventors. Rights have been purchased by the B. F. Goodrich Company and the Firestone Tire and Rubber Company.

Lettuce seed, when soaked in thiourea, germinates readily even in warm weather.

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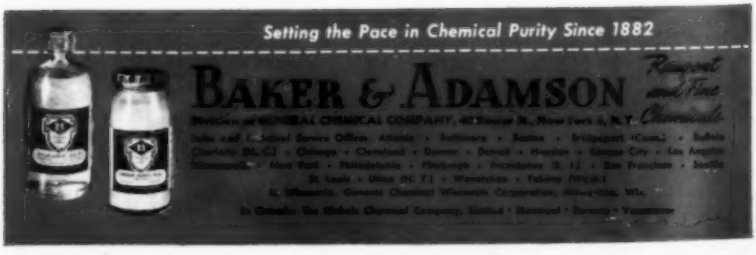
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